



## Biodegradable Erosion Control Products

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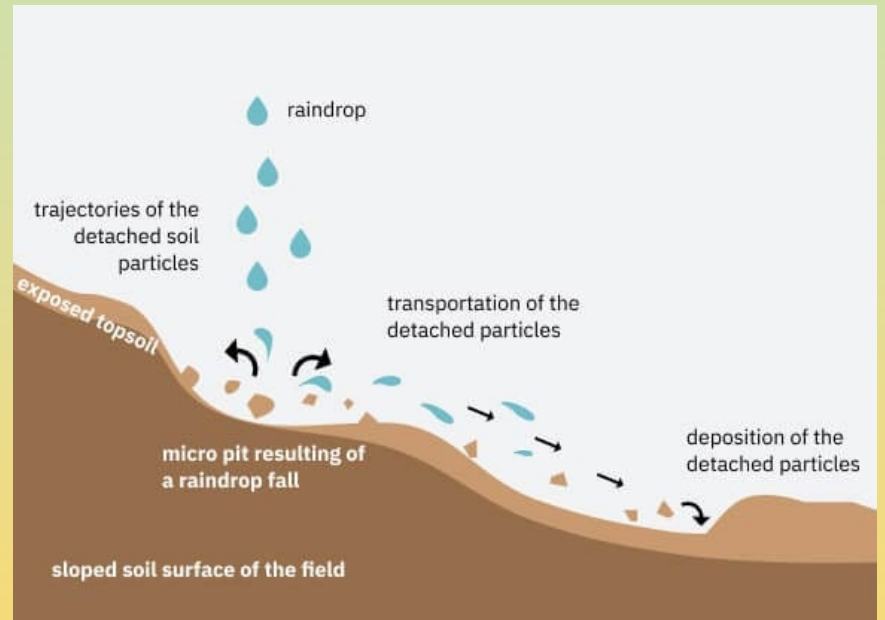
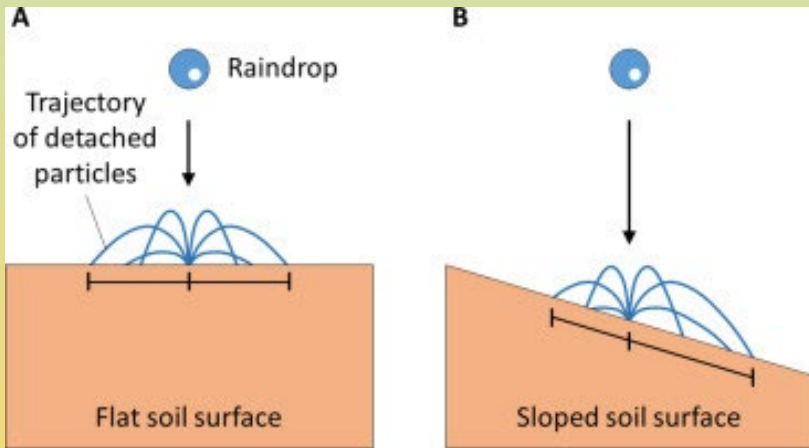
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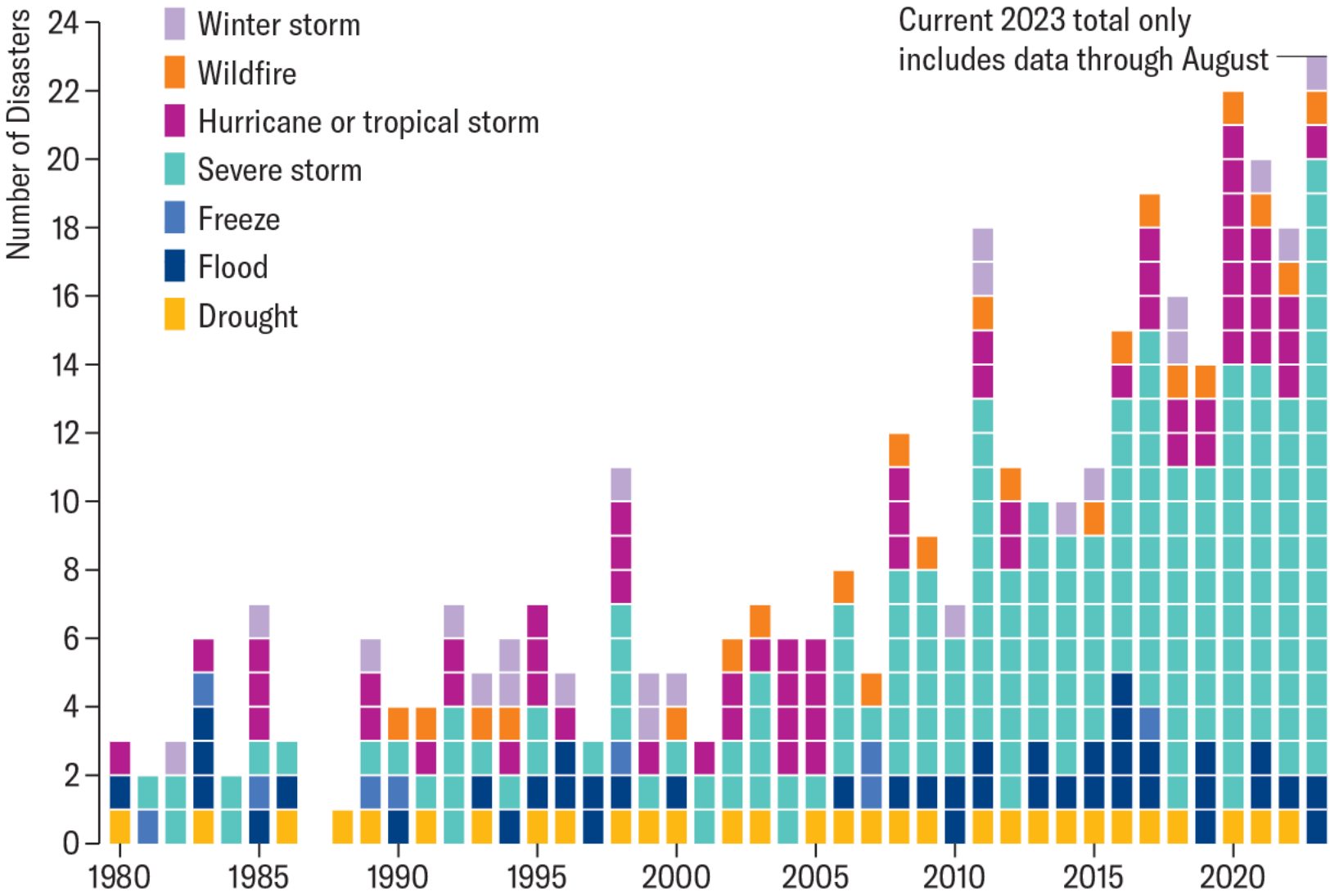


Sediment loss from erosion is one of the leading causes of water pollution





# Annual Number of Billion-Dollar Disasters, 1980–2023





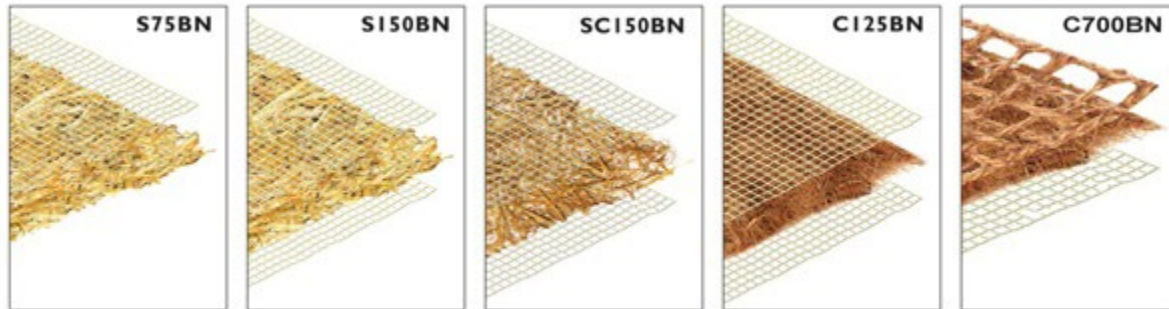




**Sustainable vegetation!**

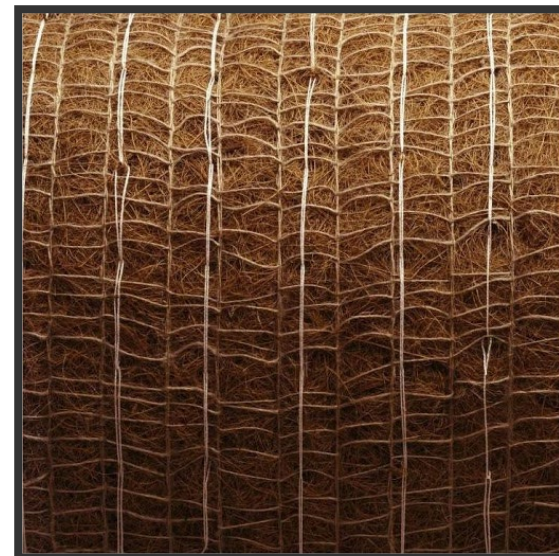
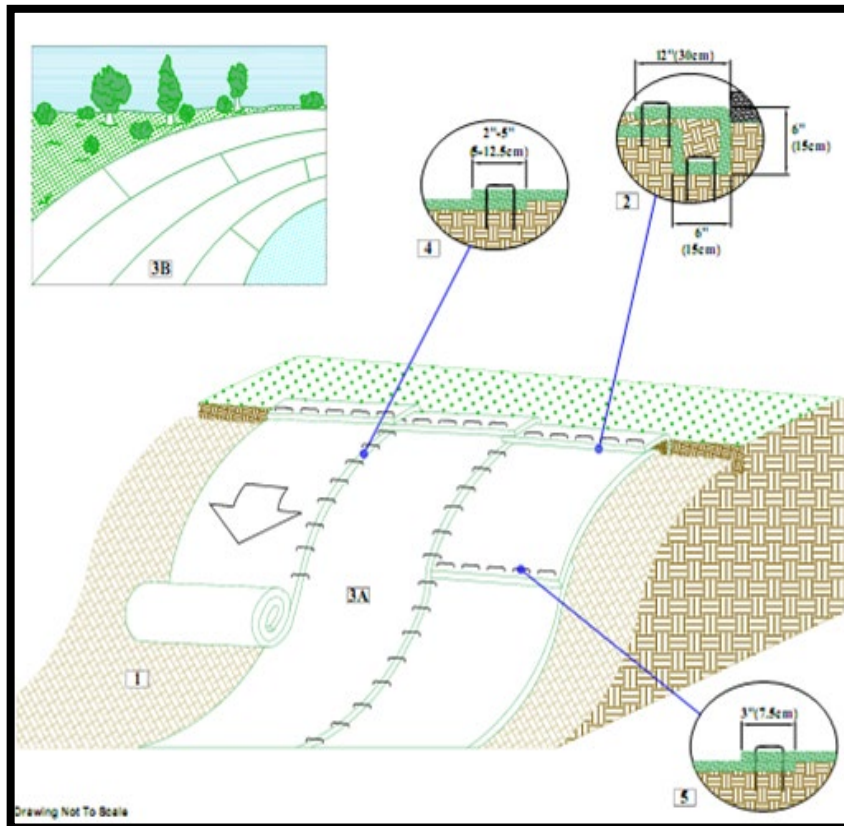


# Looking at your Solution Options



# Biodegradable Erosion Control Products

## Erosion Control Blankets



# Biodegradable Erosion Control Products

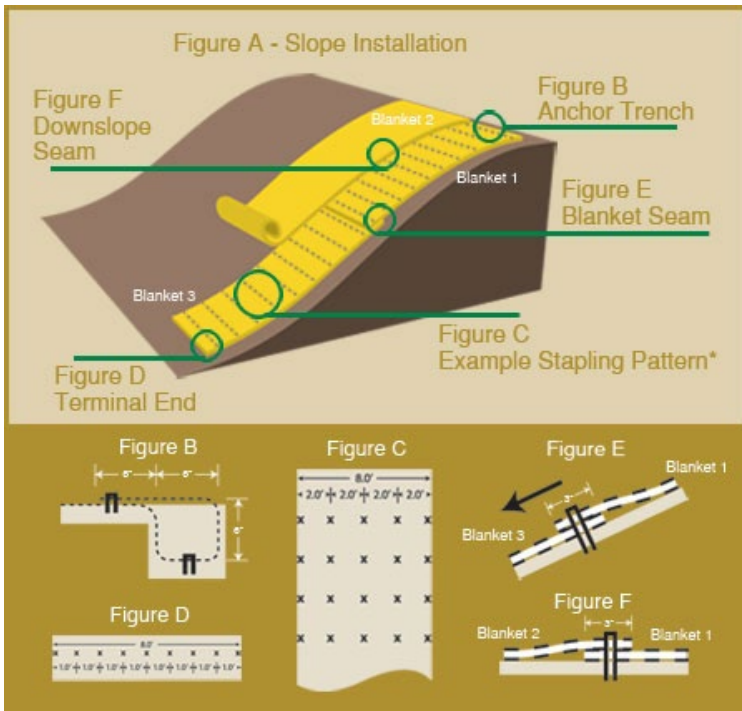
## Erosion Control Blankets





# Erosion Control Blankets

## Proper Installation of Erosion Control Blankets



### Step to take when using ECB's

- Start 1-2 feet behind crest of slope
- Trench for keying in Blanket
- Seeding and amendments prior to installation of ECB
- Staple ECB in Trench
- Backfill Trench
- Roll ECB down slope
- Pull ECB tight while stapling down slope
- Verify 100% ground contact



# Coir Logs



Coir logs: 12"-20" dia  
7 and 9lb density  
coir or polypropylene netting



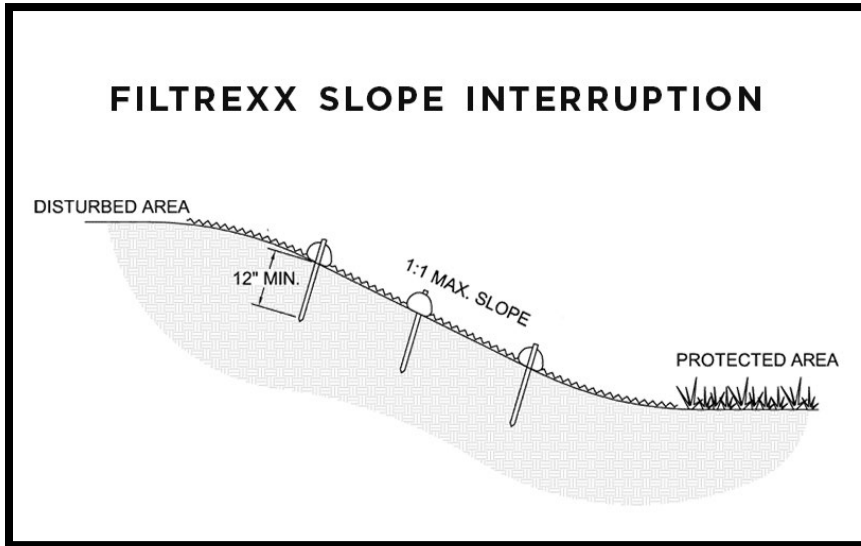






# Biodegradable Erosion Control Products

## Compost Soxx & Straw Wattles



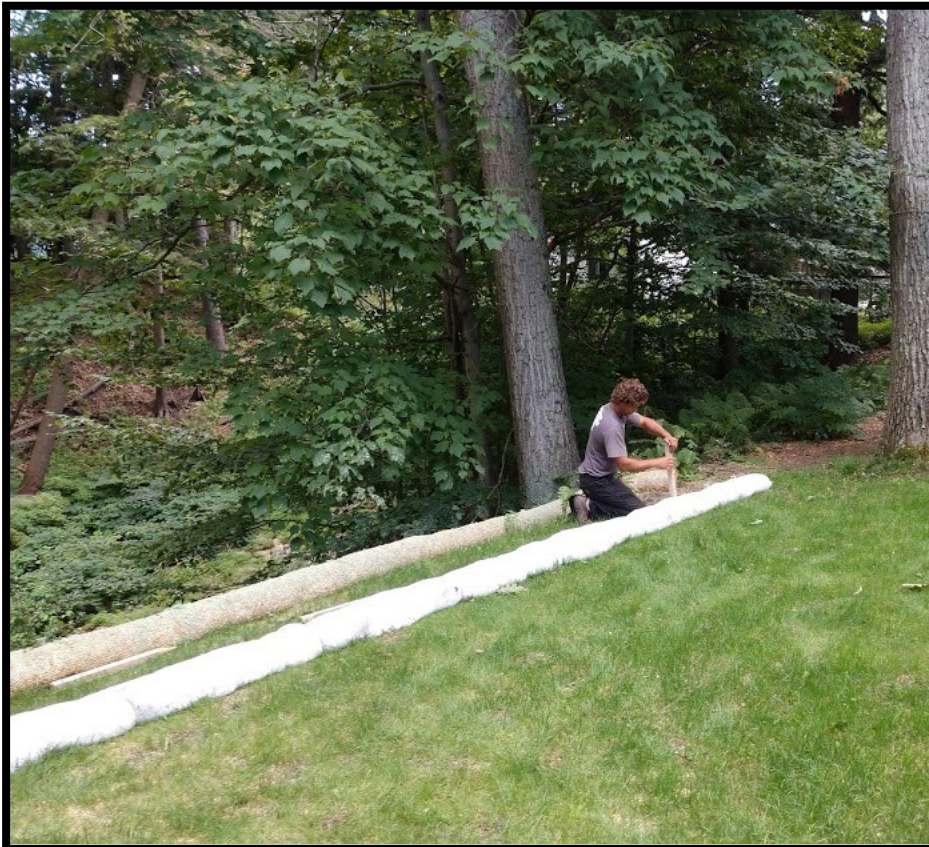
- Can use on 1:1 Slopes
- Better Trapping & Removal of Sediment & Pollutants
- More Intimate Ground Contact
- No Trenching
- Can be Installed on Frozen Ground

- Slows Runoff Velocity
- Reduce Slope Length
- Can be used in Environmentally Sensitive Areas



# Biodegradable Erosion Control Products

## Compost Soxx & Straw Wattles



# Biodegradable Erosion Control Products

## Compost Soxx & Straw Wattles

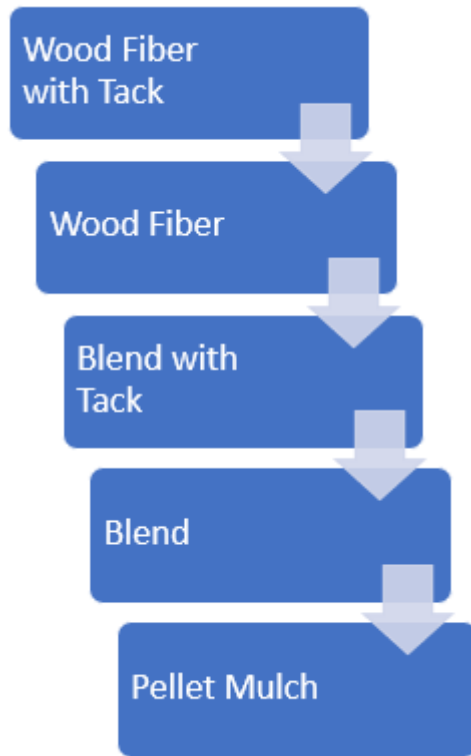


# Hydraulically- Applied Erosion Control Products

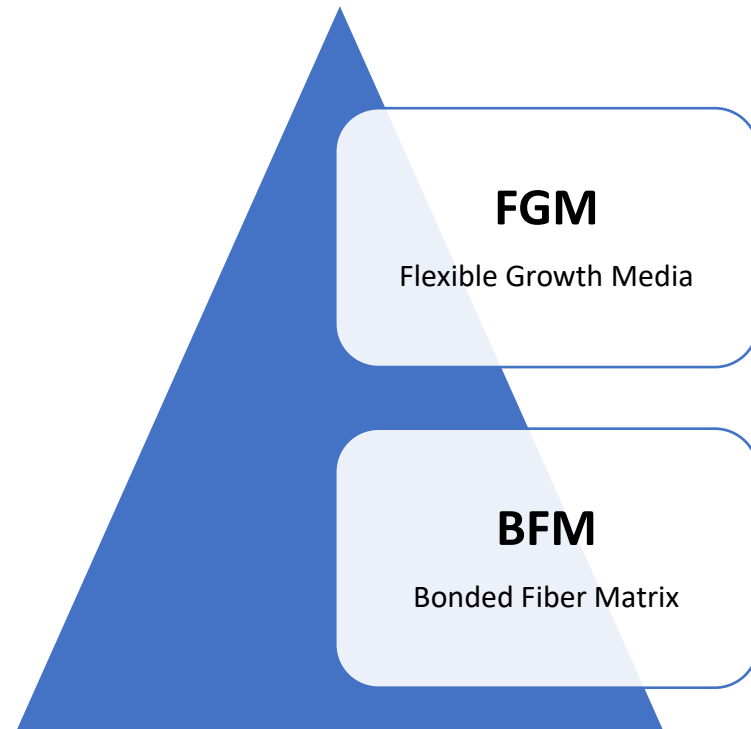
- Customized to site specific conditions
- Minimal labor required
- Economical way to control erosion and establish vegetation
- Wide range of performance platforms
- Safe for environment



# Types of Hydraulic Mulch



Seeding Mulch Products

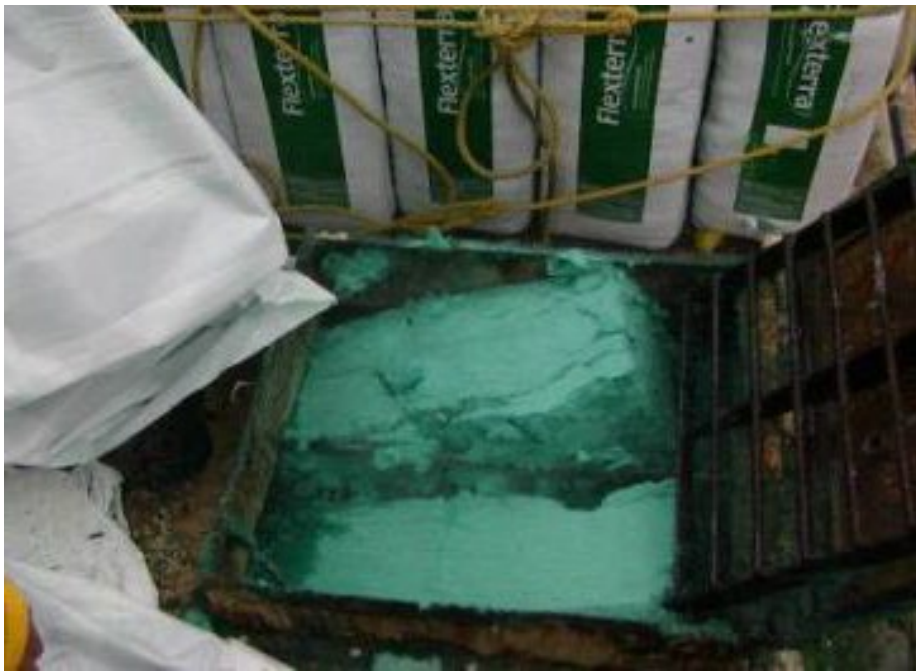


Erosion Control Mulch Products

# Enhanced Environmental Benefits



- 100% Biodegradable
  - Including interlocking man-made fibers
  - Verified via ASTM D5338 testing
- 100% Recycled Wood Fibers
  - Verified via ISO 14021
- 100% non-toxic and safe for aquatic and terrestrial life
  - Verified via EPA 2021.0 Testing
- Phyto-Sanitized wood fibers (weed and pathogen free)
  - Thermally refined process heats wood fibers to  $>380^{\circ}$  F



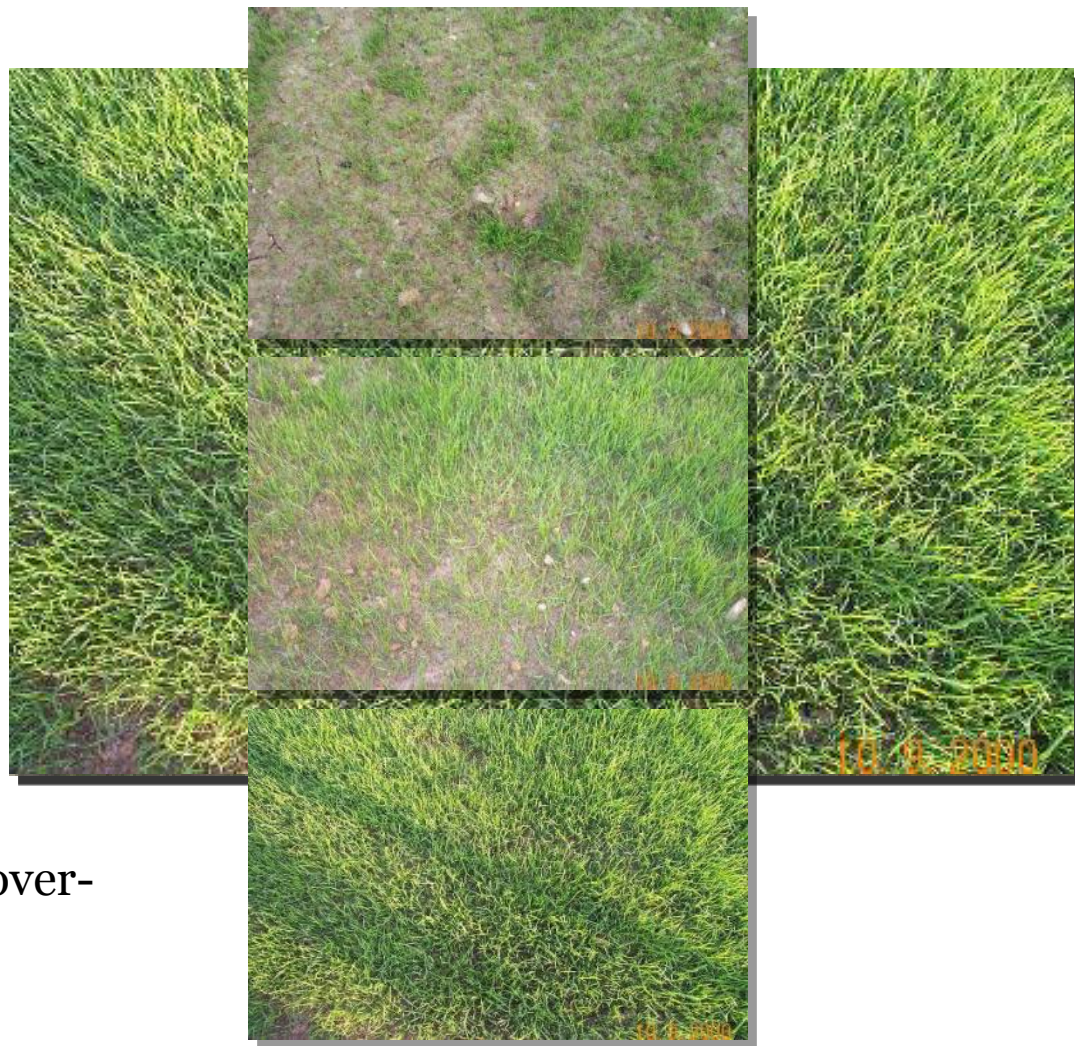




You should see  
no exposed soil  
at a 3,500  
lb./acre rate of a  
erosion control  
mulch like FGM

# Mulch Rates Makes a Big Difference in Results

- Test Plot 1 After 18 Days  
(1,500 lbs. mulch)
- Test Plot 2 After 18 Days  
(2,500 lbs. mulch)
- Test Plot 3 After 18 Days  
(3,500 lbs. mulch)



HECP's are a very small part of the overall project cost!

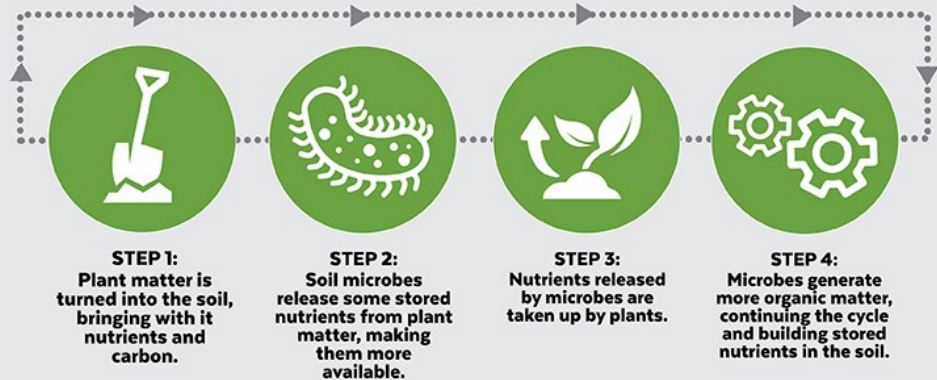


**Sustainable vegetation!**

# Sustainability Comes From Nutrient Cycling

Requires a healthy soil as the infrastructure to support and nurture vegetation

## HOW MICROBES INCREASE SOIL NUTRIENT AVAILABILITY & BUILD SOIL ORGANIC MATTER

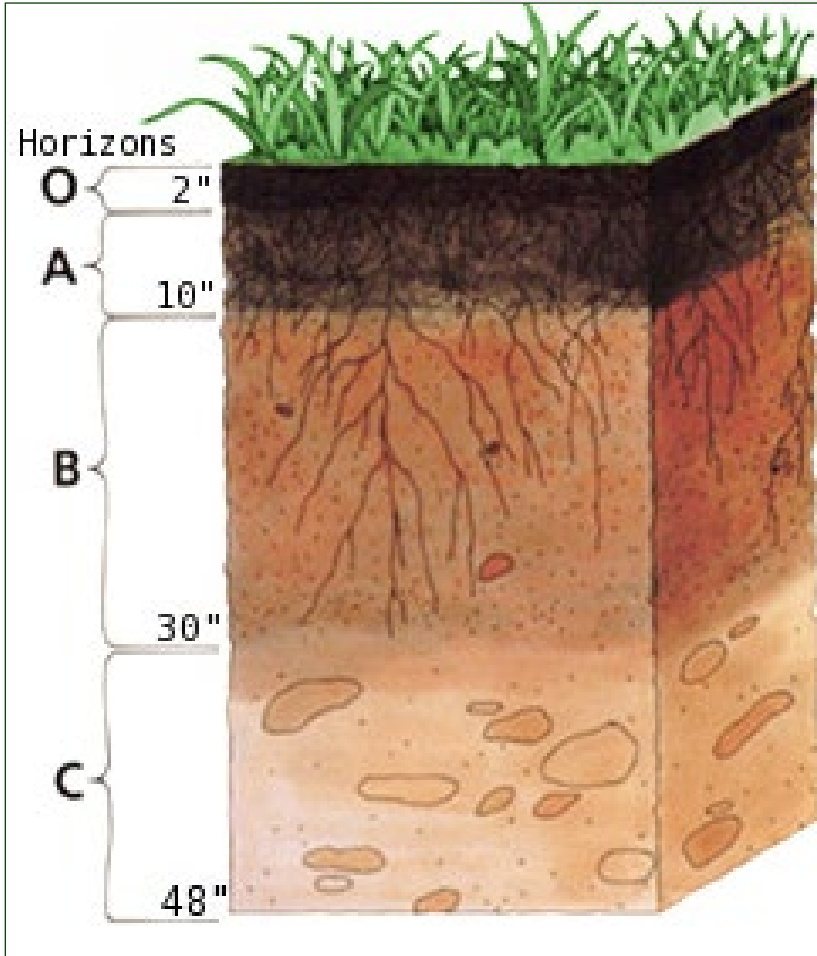


# Organic Matter and Biological Activity

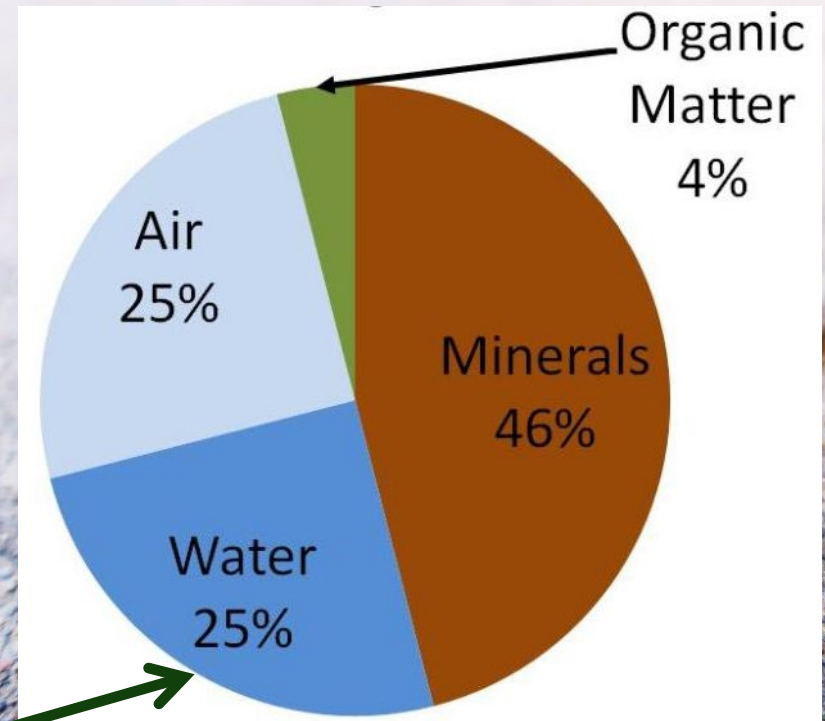
- Organic Matter (OM) is the foundation for all biological life in the soil
- OM provides structure and water-holding capacity
- Without biological life, the OM is not capable of building a solid foundation



# Ideal Soil Profile



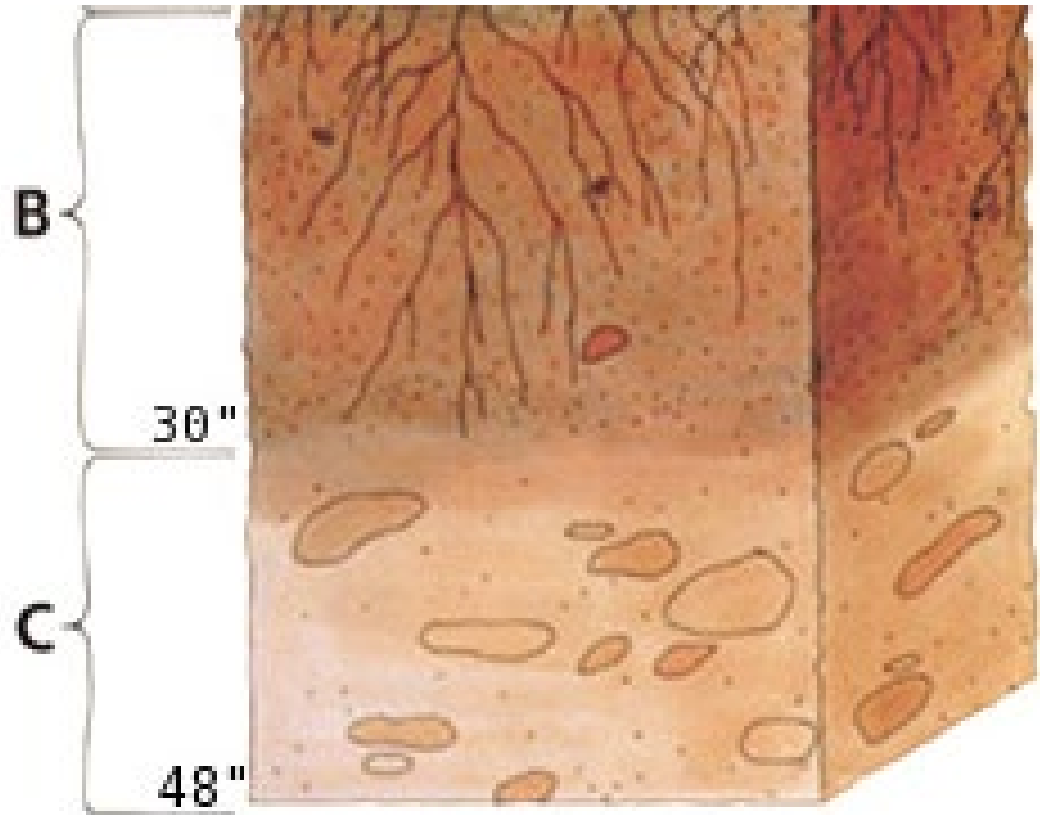
An ideal soil composition contains a balance of components as shown below.



Ideal Soil Composition

# Typical Construction Site Soil Profile

- Most projects start with “B” or “C” horizons, perhaps even worse:
  - Low organic environments
  - pH values out of range
  - High soil erodibility values
  - Toxic environments
  - Saline Soils





**BIOTIC SOIL MEDIA™**







- **Recycled Thermally Refined**
- **Bark & Wood Fibers**
- **Biopolymers**
- **Biochar**
- **Seaweed Extract**
- **Humic Acid**
- **Endomycorrhiza**
- **Bacteria Microbes**
- **Non-Toxic**
- **Phyto-Sanitized**



## Department of Transportation Site



Slopes prior to application, Sept. 21st



Installation date, Sept. 21st



Established Vegetation on Oct. 31st, 2016

### Situation

In order to establish vegetation, it's important to identify why grass isn't growing. When Profile Products was asked to assist with this problematic site in New Hampshire, performing a soil test was the very first step. The results of the soil test clearly showed that ProGanics® Biotic Soil Media™ was needed to modify the soil chemistry and jump start vegetation establishment.

ProGanics BSM™ is an alternative to topsoil and unlike traditional organic material, ProGanics is a high-quality consistent product that's easy to use. It doesn't have the variability that's found in topsoil.

### Challenges

- Unable to achieve sustainable results
- Short steep slope (≈2H:1V)
- Low pH
- Needed an alternative to trucking in topsoil as access to site was limited

### Solution & Application

- Soil test performed to determine the nutrient value at the site
- NeutralLime™ Dry at 160 lbs./acre
- Soluble Gypsum at 500 lbs./acre
- ProGanics® BSM™ at 3,500 lbs./acre
- Hydro-Blanket® BFM at 3,500 lbs./acre

### Results

After the installation of ProGanics, skepticism on whether or not vegetation could be established was answered. Using the results from the soil test, combined with ProGanics that provided a fundamental base of organic material on a highly deficient soil site, Profile and ProGanics delivered results on this challenging site.

The local engineer will be working with their DOT to ensure that ProGanics is used on all future projects where needed. Spray it. Don't spread it!

For help on your next project site, contact Profile® Sales Support at 800-508-8681 or Technical Services at [tech@profileproducts.com](mailto:tech@profileproducts.com).



**NHDOT**

**I-93**

**Exit 3**







# Thank You

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